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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/529,502 | 03/28/2005 | Gabi Muller | 12810-00039-US | 6750 |

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| EXAMINER | |
|---|---|
| ROGERS, JAMES WILLIAM | |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1618 | |

DATE MAILED: 12/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/529,502 | MULLER ET AL. | |
| | Examiner | Art Unit | |
| | James W. Rogers, Ph.D. | 1618 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *28 March 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *03/28/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 112*

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 6 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Specifically claim 6 claims a "polymer blend" when the entire description in the specification pertained to copolymers based on N-vinyllactams and N-vinyl heterocyclic compounds. There was no written support found for a cosmetic preparation comprised of a polymer blend as disclosed in claim 6, rather there was written support for a copolymer comprised of the monomers in claim 6. To expedite the examining process the examiner will simply search for a cosmetic preparation comprised of a copolymer comprising monomers A-E as currently claimed in claim 6.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 7 and 12 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically each states "polymer" in line 1, this is indefinite because generally the art accepted meaning of a polymer is a large molecule

consisting of repeating structural units, or monomers, the monomers for a polymer are the same, if there is more than one type of monomer in the polymer backbone it is a copolymer. Applicants claims are directed to a copolymer not a polymer and was examined as such. Appropriate correction is required.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel et al. (US 6,191,188 B1, disclosed by applicants).

Hossel discloses aqueous compositions and their use in cosmetics such as hair setting lotions and skin preparations in the form of mousses, gels, foams or sprays. See abstract, col 5 lin 11-23 and claims 1,9-10. The aqueous composition comprises a

copolymer based on weight A) 20-80% N-vinylcaprolactam, B) 10 to 60% N-vinylpyrrolidone and C) 5 to 50% N-vinylimidazole. See col 2 lin 1-12. Regarding the limitation that the weight ratio of C to monomer B is less than 1:12, N-vinylimidazole (VI) can be as low as 5% and N-vinylpyrrolidone (VP) can be as high as 60%, thus the smallest ratio of VI:VP is 5:60 or 1:12. The examiner notes that the claims state the ratio of C to B is less than 1:12 and the smallest ratio disclosed in Hossel is 1:12 but the term "less than" can be interpreted as being nearly the ratio of 1:12 therefore since "less than" is slightly open ended the examiner believes the ratios are significantly close (~10 % within each others range) that the limitation is met. Regarding claims 12 and 13 which limit the ratio of monomers C and B to 1:14 and 1:23 respectfully, the Hossel patent is still considered to meet these claims because it is the opinion of the examiner that optimizing the ratios of the monomers in a copolymer is routine experimental practice and generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such a concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tropsch et al. (US 5,869,032, disclosed by applicants).

Tropsch discloses copolymers suitable as active ingredients in cosmetic formulations such as skin cosmetics and hair styling compositions in the form of gels and foams. See abstract and col 3 lin 40-55. The copolymer comprises a copolymer based on weight A) 20-80% N-vinylcaprolactam, B) 10 to 60% N-vinylpyrrolidone and C) 5 to 50% N-vinylimidazole. See col 1 lin 8-lin 19. The examiner notes that the claims state the ratio of C to B is less than 1:12 and the smallest ratio disclosed in Tropsch is 1:12 but the term "less than" can be interpreted as being nearly the ratio of 1:12 therefore since "less than" is slightly open ended the examiner believes the ratios are significantly close (~10 % within each others range) that the limitation is met. Regarding claims 12 and 13 which limit the ratio of monomers C and B to 1:14 and 1:23 respectfully, the Tropsch patent is still considered to meet these claims because it is the opinion of the examiner that optimizing the ratios of the monomers in a copolymer is routine experimental practice and generally, differences in concentration will not support the patentability of subject matter encompassed by the prior art unless there is evidence indicating such a concentration is critical. "[W]here the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955). The normal desire of scientists or artisans to improve upon what is already generally known provides the motivation to determine where in a disclosed set of

percentage ranges is the optimum combination of percentages."); In re Hoeschele, 406 F.2d 1403, 160 USPQ 809 (CCPA 1969).

Claims 6-7 and 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel et al. (US 2001/0021375 A1).

Hossel discloses cosmetic sunscreen preparations in the form of emulsions or gels comprised of at least one copolymer comprised of a) 0.01 to 99.99% of N-vinylimidazoles and b) 0.01 to 99.99% of at least one neutral or basic water soluble polymer which is different from a) which includes N-vinylcaprolactam and N-vinylpyrrolidone. See [0001],[0011], [0040] and [0100]. The examiner notes that b) can be a mixture of two monomers such as N-vinylcaprolactam and N-vinylpyrrolidone therefore the limitations of the B and C monomers in the copolymer of applicants claimed invention are met. Within the broad range of weight percents of a) and b) above it is obvious that the skilled artisan could select the weight percents and weight ratios disclosed by applicants for monomers A,B and C.

Claims 6-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hossel et al. (US 2001/0021375 A1, '375 from hereon) in view of either Tropsch et al. (US 5,869,032, disclosed by applicants) or Hossel et al. (US 6,191,188 B1, disclosed by applicants, '188 form here on).

'375 is disclosed above.

'375 discloses cosmetic compositions, but the compositions are mostly directed to use on human skin and 375' is silent on the copolymers use in shampoos and hair setting compositions.

Tropsch and '188 are disclosed above.

Tropsch or '188 are used primarily for their disclosures on the use of copolymers comprising N-vinylimidazole, N-vinylcaprolactam and N-vinylpyrrolidone for use in cosmetic hair compositions such as hair setting and styling compositions.

It would have been obvious to a person of ordinary skill in the art at the time the claimed invention was made to combine the art described in the documents above because '375 discloses all of applicants claimed invention but is silent on the use of the disclosed copolymers in shampoos and hair setting compositions while Tropsch and '188 showed that it was already known in the art to use such copolymers such as those disclosed in '375 in hair compositions. The motivation to combine the above documents would be a cosmetic preparation useful in skin and hair cosmetics comprising a copolymer comprised of N-vinylimidazole, N-vinylcaprolactam and N-vinylpyrrolidone. The advantage of such a composition with the disclosed copolymers would be improved stability, formulation and sensory properties for use in both skin and hair cosmetics. See [0008] in '375 and col 4 lin 54-61 in Tropsch or col 1 lin 38-55 in '188. Thus, the claimed invention, taken as a whole was *prima facie* obvious over the combined teachings of the prior art.

**Conclusion**

No claims are allowed. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James W. Rogers, Ph.D. whose telephone number is (571) 272-7838. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Hartley can be reached on (571) 272-0616. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MICHAEL G. HARTLEY
SUPERVISORY PATENT EXAMINER